Consistent maximum-likelihood estimation with dependent observations

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CORRIGENDA

R.D.H. Heijmans and J.R. Magnus, Consistent maximum-likelihood estimation with dependent observations: The general (non-normal) case and the normal case, Journal of Econometrics 32 (1986) 253–285.

Professor B.B. van der Genugten of the Katholieke Universiteit Brabant in Tilburg has pointed out to us that condition (A.3) in Theorem 1, though sufficient for the consistency of $\{\hat{\gamma}_n\}$, is not necessary without further conditions on the likelihood function. This is due to the fact (in the notation of section 4) that the event $\{S_n(\gamma_0, N_0^c(\gamma_0)) < 0\}$ is contained in the event $\{\hat{\gamma}_n \notin N_0^c(\gamma_0)\}$, but not vice versa.

Thus, in Theorem 1 (p. 259, lines 8–9), 'a necessary and sufficient condition' should read 'sufficient', and the last paragraph of section 4 (from 'To prove the converse...') should be deleted.

In addition, condition (B.4) in Theorem 2 (p. 262) should be slightly strengthened and should now read: for every $\gamma \neq \gamma_0 \in \Gamma$ there exists a δ $(0 < \delta < 1)$ and a neighbourhood $N(\gamma)$ of γ such that

$$\lim_{n \to \infty} \mathrm{P}\left[(1/k_n(\gamma, \gamma_0)) \sup_{\phi \in N(\gamma)} (\Lambda_n(\phi) - \Lambda_n(\gamma)) < 1 - \delta\right] = 1.$$

As a result, the proofs of Theorem 2 (p. 264, lines 4–7) and Theorem 3 (p. 272, formula (7.16) and the four lines following this equation) have to be adapted in an obvious manner. Theorems 3–6 and the proofs of Theorems 4–6 are unaffected by these changes.